



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,823	06/04/2001	Imants R. Lauks	PAT 484-2	1986

26123 7590 10/16/2003

BORDEN LADNER GERVAIS LLP  
WORLD EXCHANGE PLAZA  
100 QUEEN STREET SUITE 1100  
OTTAWA, ON K1P 1J9  
CANADA

EXAMINER
----------

OLSEN, KAJ K

ART UNIT	PAPER NUMBER
----------	--------------

1753

DATE MAILED: 10/16/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/871,823

Applicant(s)

LAUKS, IMANTS R.

Examiner

Kaj Olsen

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26 and 27 is/are allowed.
- 6) ☐ Claim(s) 1-5, 7-25 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3.                      6) ☐ Other:

Art Unit: 1753

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7, 8, 10, 12-25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. In claims 7 and 8, the term “the metal foil” lacks antecedent basis.
4. Claims 12 and 14-25 are all drawn to a “diagnostic device”, but claims 1 and 8 (from which claims 12 and 14-25 depend from) are drawn to an “electrode module”.
5. In claim 12, the term “the housing” lacks antecedent basis.
6. In claim 13, the terms “the opening” and “the module cavity” lack antecedent basis.
7. Claims 21 and 22 would appear to be redundant because they depend from claim 8 and claim 8 already specified the use of copper or copper coated with nickel and gold.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Carter et al (USP 5,628,890).

Art Unit: 1753

3. Carter discloses an electrode module comprising a planar carrier module comprising a laminate of a metal layer divided into at least two metal conductor elements (2, 3, 4, 5, and 5a) and an insulating layer 7. Three electrodes (4, 5, and 5a) are formed on the carrier module and a membrane element 9 imparts chemical sensitivity to the electrode (col. 4, line 1 through col. 5, line 35) where the membrane is applied to the insulating layer to be in contact with the metal conductors elements through the insulating layer (see fig. 1).

4. With respect to the use of a metal foil and an insulator foil, both conductor elements (2, 3, 4, 5, and 5a) and insulator layer 7 are very thin and would inherently constitute a “foil” giving the claim language its broadest reasonable interpretation.

5. With respect to the presences of a housing, elements 1, 11, and 13 in conjunction with each other would appear to read on the term “housing” giving the claim language its broadest reasonable interpretation.

6. With respect to the presence of “fluidic elements”, channels 12 and 14 and mesh 10 would all appear to control fluid movement through the module and would read on fluidic elements giving the claim language its broadest reasonable interpretation.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1753

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carter in view of Rankl et al (Smart Card Handbook, chapter 3).

9. Carter set forth all the limitations of the claim, but did not explicitly recite having the chip module conform to ISO standard 7816. Rankl teaches that this is a standard that is known in the art that finds utility for a number of devices including smart cards (p. 21). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize existing ISO standards, such as ISO standard 7816, because the use of existing ISO standards allows the device to be utilized with existing data processors also utilizing said ISO standard, thereby increasing the electrode module's utility in the art.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carter in view of Winarta et al (USP 6,287,451).

11. Carter set forth all the limitations of the claim, but did not explicitly recite the perforation over each metal conductor (Carter utilizes a single perforation for all the electrodes). However, Winarta teaches that such a configuration of insulating layer 30 is well known in the art (fig. 2). This configuration provides greater electrical isolation when the electrodes are not in use, and it would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Winarta for the electrode module of Carter in order to increase the electrical isolation when the device is not in operation, thereby increasing the sensor shelf life.

12. Claims 7, 8, 10, 16-19, 21, 22, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter (with or without the teachings of Rankl or Winarta) in view of Holker et al (USP 6,484,045).

Art Unit: 1753

13. The reference(s) set forth all the limitations of claims (see rejections above), but did not explicitly set forth the use of a metal layer of copper or copper with nickel and gold. Holker teaches in an alternate analyte sensor that copper is a well known electrical conductor utilized in the sensor art and specifically taught the combination of copper with nickel and gold (col. 7, lines 41-45). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Holker with the electrode module of Carter (or Carter with either Rankl or Winarta) because these particular combinations of metals were found to have great utility as electrodes and the substitution of one known metallic composition for another requires only routine skill in the art.

14. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter in view of Holker as applied to claim 8 above, and further in view of Lauks et al (USP 5,096,669).

15. Claims 9 and <sup>11</sup>~~13~~ are rejected in the alternative under 35 U.S.C. 103(a) as being unpatentable over Carter in view of Lauks.

16. With respect to claims 12 and 14, Carter and Holker set forth all the limitation of the claim, but did not explicitly recite the presence of a module cavity. However, a measurement device is meant to be utilized in conjunction with Carter (col. 3, lines 45-49). Lauks shows a conventional measuring device to be utilized in conjunction with the electrode module and it comprises a slot 360 (fig. 1) that would read on the term "module cavity" giving the claim language its broadest reasonable interpretation. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Lauks for the electrode module of Carter because a slot is a conventional means of connecting an electrode

Art Unit: 1753

module to a measuring device the substitution of one known means for another requires only routine skill in the art.

17. With respect to claims 9 and 11 in the alternative. The measuring device of Lauks would read on “housing” giving the claim language its broadest reasonable interpretation. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the housing teaching of Lauks for the electrode module of Carter because a slot is a conventional means of connecting an electrode module to a measuring device the substitution of one known means for another requires only routine skill in the art.

18. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carter in view of Holker as applied to claim 8 above, and further in view of Douglas et al (US 2003/0106810).

19. The references set forth all the limitations of the claim, but did not explicitly recite the use of epoxy material for the insulating layer. Douglas teaches in an alternate electrode module that the use of epoxy as an insulating layer over the electrode layer is well known in the art (p. 7, paragraph 0097). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Douglas for the electrode module of Carter and Holker because the substitution of one known insulating means for another requires only routine skill in the art.

***Allowable Subject Matter***

20. Claims 26 and 27 are allowed.

Art Unit: 1753

21. Claims 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

22. Claims 13, 15, and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

23. The following is a statement of reasons for the indication of allowable subject matter: With respect to claims 6 and 20, the prior art does not disclose nor render obvious all the limitations of claim 1 and further comprising an electrokinetic conductor. With respect to claim 13 or 15, the prior art does not disclose nor render obvious all the limitations of claims 9 or 12 and further comprising the particular set forth opening being in fluid communication with the module cavity or the seal preventing fluids in the module cavity from flowing around the electrode module. With respect to claims 26 and 27, the prior art does not disclose nor render obvious all the limitations of claim 26 in totality with particular attention to the insulator foils facing the module cavity.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (703) 305-0506. The examiner can normally be reached on Monday through Thursday from 7:00 AM-4:30 PM. The examiner can also be reached on alternate Fridays.



Art Unit: 1753

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Mr. Nam Nguyen, can be reached at (703) 308-3322.

When filing a fax in Group 1700, please indicate in the header "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of this application. This will expedite processing of your papers. The fax number for regular communications is (703) 305-3599 and the fax number for after-final communications is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'Kaj K. Olsen', with a stylized flourish extending from the end.

Kaj K. Olsen  
Patent Examiner  
AU 1753  
October 1, 2003